

AN ANNOTATED CHECKLIST OF THE STONEFLIES (PLECOPTERA) OF MAINE¹

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ABSTRACT: A total of 92 species representing nine families and 37 genera are contained in the first comprehensive checklist of Maine Plecoptera. Nineteen additional species which occur in adjacent states and provinces, but which have not yet been collected in Maine, are also listed. County distributions and adult collection dates are included for species occurring in the state. Twenty one species are reported from Maine for the first time.

Although previous records of Plecoptera from Maine are scattered throughout the literature, the study of Maine species has been generally neglected. Studies by Proctor (1946), Mingo, et al. (1979), Rabeni and Gibbs (1979) and Mingo and Gibbs (1980) have added to the understanding of Maine species but have concerned either limited geographic areas or specific watersheds.

The checklist presented herein represents the first attempt to compile a comprehensive inventory of Plecoptera species occurring in Maine. It is based primarily upon specimens collected by the author and reports contained in the literature. At present it contains nine families, 37 genera and 92 species. In addition five species new to science have been collected and are currently under study.

The classification system used in the checklist follows that of Illies (1966) and Zwick (1973) as reviewed by Baumann (1976). The earliest and latest dates of collection follow each species name and are based solely upon adult specimens. County distributions are included below each species name and are based upon adult as well as immature specimens. The inclusion of a county name in parentheses following a single date of collection indicates that adults of that species were collected only from that county on the date given. Additional county records listed for these species refer to immature specimens only.

Nineteen additional species have been reported from adjacent states and provinces but have not yet been collected in Maine. These species are indicated with a double asterisk. The territory concerned is listed for each of these species and the appropriate literature citation is given. Nine species previously reported from the state but not collected by the author during this study are indicated with a plus sign. The county of record is listed for each of these species and the appropriate literature citation is given. New state distribution records are indicated with a single asterisk.

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Nemouridae

Amphinemurinae

Amphinemura

- A. nigritta* (Provancher) 30 July - 7 September
Aroostook, Piscataquis and Somerset County
- A. wui* (Claassen) 3 June - 16 August
Piscataquis and Somerset County

Nemourinae

Nemoura

- **N. trispinosa* Claassen 6 May - 3 June
Piscataquis County

Ostrocerca

- O. albidipennis* (Walker) 17 May (Penobscot County)
Penobscot, Piscataquis and Washington County
- **O. complexa* (Claassen) 23 May
Franklin County
- +*O. prolongata* (Claassen)
Penobscot County (Needham and Claassen, 1925)
- O. truncata* (Claassen) nymphs only
Hancock, Piscataquis and Somerset County

Paranemoura

- P. perfecta* (Walker) 4 May - 2 June
Penobscot, Piscataquis, Somerset and Washington County
- P. sp. A* 4 May - 7 July
Piscataquis and Washington County

Podmosta

- P. macdunnoughi* (Ricker) 5 May - 15 May
Hancock, Piscataquis and Washington County

Prostoia

- P. completa* (Walker) 5 May - 26 June
Penobscot, Piscataquis and Washington County
- **P. similis* (Hagen) 10 June
Somerset County

Shipsa

- S. rotunda* (Claassen) 4 May - 11 May
Penobscot and Washington County
- S. sp. A* 19 June
Penobscot County

Soyedina

- S. vallicularia* (Wu) 4 May - 25 June
Somerset and Washington County
- **S. washingtoni* (Claassen) 25 May
Piscataquis County

Zapada

- Z. sp. A* 24 April
Piscataquis County

Taeniopterygidae

Brachypterinae

Bolotoperla

- B. rossi* (Frison) 5 May - 12 May
Penobscot and Washington County

Oemopteryx

- **O. contorta* (Needham and Claassen) 24 April - 8 May
Piscataquis County
- ***O. glacialis* (Newport)
Quebec (Ricker, et al., 1968)

Strophopteryx

- S. fasciata* (Burmeister) 31 March - 5 May
Hancock and Penobscot County

Taenionema

- **T. atlanticum* Ricker and Ross 8 May - 1 June
Piscataquis and Somerset County

Taeniopteryginae

Taeniopteryx

- T. burski* Ricker and Ross 22 March - 16 April
Hancock, Penobscot and Washington County
- T. maura* (Pictet) 7 April - 16 April
Penobscot County
- T. nivalis* (Fitch) nymphs only
Penobscot, Piscataquis and Washington County
- T. parvula* Banks 22 March - 4 May
Hancock, Penobscot, Piscataquis and Washington County

Capniidae

Allocapnia

- +*A. illinoensis* Frison
Southern Maine (Ross and Ricker, 1971)
- A. maria* Hanson 9 April - 29 March
Hancock County
- A. minima* (Newport) 25 February - 5 May
Hancock, Penobscot, Piscataquis and Washington County
- ***A. nivicola* (Fitch)
New Brunswick (Ross and Ricker, 1971)
New Hampshire (Fiance, 1977)
Nova Scotia (Ross and Ricker, 1971)
Quebec (Ricker, et al., 1968)
- ***A. pechumani* Ross and Ricker
New Brunswick (Ross and Ricker, 1971)
Nova Scotia (Ross and Ricker, 1971)
Quebec (Ross and Ricker, 1971)
- A. pygmaea* (Burmeister) 1 March - 16 April
Hancock, Kennebec, Penobscot, Piscataquis and Washington County
- +*A. recta* (Claassen)
Southern Maine (Ross and Ricker, 1971)
- ***A. vivipara* (Claassen)
Quebec (Ross and Ricker, 1971)
- +*A. zola* Ricker
This species occurs in a diagonal band from the southwestern flanks of the Appalachians to the hill country of Maine and New Brunswick (Ross and Ricker, 1971).

Capnia

- C. manitoba* Claassen 14 April - 1 June
Piscataquis County
- ***C. vernalis* Newport
Quebec (Ricker, et al., 1968)

Nemocapnia

- ***N. carolina* Banks
Quebec (Harper and Hynes, 1971 and Harper, 1971)

Paracapnia

- P. angulata* Hanson 13 April - 27 May
Hancock, Penobscot and Washington County
P. opis (Newman) 9 April - 3 June
Hancock, Piscataquis and Washington County

Utacapnia

- ***U. labradora* (Ricker)
Quebec (Ricker, et al., 1968)

Leuctridae

Leuctrinae

Leuctra

- ***L. baddecka* Ricker
Nova Scotia (Ricker, 1965 and Hitchcock, 1974)
L. duplicata Claassen 17 June
Washington County
L. ferruginea (Walker) 3 June - 28 September
Aroostook and Piscataquis County
L. grandis Banks 1 June
Piscataquis County
***L. laura* Hitchcock
New Hampshire (Hitchcock, 1969 and 1974)
***L. maria* Hanson
New Hampshire (Hanson, 1941 and Hitchcock, 1974)
L. sibleyi Claassen 1 June - 26 June
Penobscot, Piscataquis, Somerset and Washington County
L. tenella Provancher 14 June - 16 August
Hancock and Piscataquis County
L. tenuis (Pictet) 25 June - 23 August
Piscataquis and Washington County
***L. triloba* Claassen
Quebec (Ricker, et al., 1968)
L. truncata Claassen 7 August - 22 August
Hancock and Piscataquis County
**L. variabilis* Hanson 29 August
Piscataquis County
Paraleuctra
P. sara (Claassen) 29 April - 10 June
Aroostook, Piscataquis and Washington County

Pteronarcyidae

In the classification system used by Illies (1966) and Zwick (1973) the family Pteronarcyidae contains two eastern genera: *Allonarcy's* and *Pteronarcys*. The validity of *Allonarcy's* has been questioned and has recently been placed into synonymy with *Pteronarcys* by Stark and Szczytko (1982).

Pteronarcys

- P. biloba* (Newman) 3 June (Piscataquis County)
Aroostook, Franklin, Penobscot and Piscataquis County
P. comstocki (Smith) nymphs only
Aroostook and Hancock County

- P. dorsata* (Say) 10 May - 22 May
Aroostook, Hancock, Oxford and Washington County
- P. proteus* (Newman) nymphs only
Aroostook and Piscataquis County

Peltoperlidae**Peltoperlinae*****Peltoperla***

- ***P. arcuata* Needham
Quebec (Ricker, et al., 1968)

Tallaperla

- **T. maria* (Needham and Smith) 9 June (Somerset County)
Franklin, Oxford, Piscataquis and Somerset County

Perlodidae**Isoperlinae*****Isoperla***

- +*I. bilineata* (Say)
Hancock County (Proctor, 1946)
- ***I. cotta* Ricker
Quebec (Ricker, et al., 1968)
- I. dicala* Frison 10 June - 13 July
Penobscot and Washington County
- I. francesca* Harper 14 June - 7 July
Piscataquis and Washington County
- I. frisoni* Illies 10 June - 12 July
Hancock, Piscataquis and Washington County
- I. holochlora* (Klapalek) 24 July - 15 August
Aroostook and Piscataquis County
- I. lata* Frison 10 June (Washington County)
Penobscot and Washington County
- **I. marlynia* Needham and Claassen nymphs only
Washington County
- +*I. montana* (Banks)
Hancock County (Needham and Classen, 1925)
- **I. namata* Frison nymphs only
Piscataquis County
- **I. orata* Frison nymphs only
Aroostook and Piscataquis County
- I. signata* (Banks) 17 June - 11 July
Hancock, Penobscot and Washington County
- **I. similis* (Hagen) 19 May (Washington County)
Piscataquis and Washington County
- +*I. slossonae* (Banks)
Piscataquis County (Frison, 1942)
- I. transmarina* (Newman) 27 May - 14 June
Penobscot, Piscataquis and Washington County
- I. sp. A.* 23 May - 3 June
Piscataquis County
- I. sp. B.* 1 June
Piscataquis County

Perlodinae***Arcynopteryx***

- **A. compacta* (MacKacklan) nymphs only
Piscataquis County

Cultus

- **C. decisus* (Walker) nymphs only
Aroostook, Piscataquis and Somerset County

Diura

- ***D. nanseni* Kempny
New Hampshire (Ricker, 1964)
Quebec (Ricker, et al., 1968)

Helopicus

- +*H. subvarians* (Banks)
Washington County (Frison, 1942)

Isogenoides

- ***I. doratus* (Frison)
Quebec (Ricker, et al., 1968)
**I. frontalis* (Newman) nymphs only
Piscataquis County
I. hansonii Ricker nymphs only
Piscataquis and Washington County
***I. olivaceus* (Walker)
Quebec (Ricker, et al., 1968)

Malirekus

- M. hastatus* (Banks) nymphs only
Aroostook, Piscataquis and Washington County

Chloroperlidae**Chloroperlinae****Alloperla**

- A. atlantica* Baumann 10 June - 12 July
Piscataquis and Washington County
**A. banksi* Frison 13 July
Penobscot County
A. caudata Frison 10 June - 7 July
Piscataquis and Washington County
A. chloris Frison 8 June - 30 July
Piscataquis County
**A. concolor* Ricker 1 June - 14 June
Piscataquis County
A. ideii (Ricker) 6 June - 13 July
Washington County
A. leonarda Ricker 17 June
Washington County
**A. roinae* Ricker 18 July - 15 August
Piscataquis County
***A. vostoki* Ricker
Nova Scotia (Ricker, 1947)

Hastaperla

- H. brevis* (Banks) 10 June - 30 July
Hancock, Penobscot, Piscataquis and Washington County
H. orpha (Frison) 27 May - 24 June
Hancock, Penobscot and Washington County

Rasvena

- ***R. terna* (Frison)
New Hampshire (Fiance, 1977)

Suwallia

- S. marginata* (Banks) 18 July - 29 August
Piscataquis County

Sweltza

- S. lateralis* (Banks) 25 May - 1 June
Piscataquis County
- S. mediana* (Banks) 1 June - 21 June
Piscataquis County
- **S. naica* (Provancher) 20 May - 3 June
Piscataquis County
- S. onkos* (Ricker) 29 May - 10 June
Washington County

Paraperlinae

Utaperla

- ***U. gaspesiana* Harper and Roy
New Hampshire (Fiance, 1977)
Quebec (Harper and Roy, 1975)

Perlidae

Acroneuriinae

Acroneuria

- A. abnormis* (Newman) 10 June - 14 July
Aroostook, Penobscot, Piscataquis, Somerset and Washington County
- A. arenosa* (Pictet) 30 June - 3 August
Penobscot County
- A. carolinensis* (Banks) 12 June - 3 August
Aroostook and Penobscot County
- A. lycorias* (Newman) 10 July (Penobscot County)
Penobscot and Washington County

Perlesta

- P. placida* (Hagen) 30 June - 16 August
Hancock, Penobscot and Washington County

Perlinella

- P. drymo* (Newman) 29 May - 17 June
Penobscot and Washington County

Perlinae

Neoperla

- **N. freytagi* Stark and Baumann 4 July - 27 July
Washington County
- +*N. mainensis* Banks
Kennebec County (Banks, 1948)

N. mainensis was originally described by Banks (1948) as a subspecies of *Neoperla clymene* (Newman). It has since been elevated to species status by Stark and Baumann (1978) in their revision of the *Neoperla* species complex.

- **N. stewarti* Stark and Baumann 30 June
Penobscot County

Paragnetina

- P. immarginata* (Say) 17 June (Washington County)
Aroostook, Franklin, Penobscot, Piscataquis and Washington County
- P. media* (Walker) 17 June - 13 July
Penobscot, Piscataquis and Washington County

Phasganophora

- P. capitata* (Pictet) 10 June - 20 July
Aroostook, Hancock, Penobscot, Piscataquis and Washington County

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